

Title (en)
SLEWING APPARATUS

Title (de)
DREHVORRICHTUNG

Title (fr)
DISPOSITIF DE PIVOTEMENT

Publication
EP 3272693 B1 20200304 (EN)

Application
EP 16765070 A 20160317

Priority
• JP 2015055753 A 20150319
• JP 2016058510 W 20160317

Abstract (en)
[origin: EP3272693A1] [Problem] To provide a pivoting device that can control swinging of a suspended load and can reduce the pivot time.
[Solution] A pivoting device implements: an acquisition process to acquire a pivot start position, a pivot end position, and a pendulum length; a pivoting angular velocity pattern determination process to determine, by way of optimal control, a pivoting angular velocity pattern in a first interval to reach a pivoting angular velocity \dot{E} by accelerating, decelerating, and accelerating from the pivot start position and in a second interval to stop at the pivot end position by decelerating, accelerating, and decelerating from the pivoting angular velocity \dot{E} ; and an actuator control process to cause a pivot actuator to pivot the pivoting body so that the distal end of a boom moves in the pivot direction at a speed indicated by the pivoting angular velocity pattern. In addition, during the pivoting angular velocity determination process, the pivoting device determines a pivoting angular velocity pattern for which the difference between the local maximum angular velocity and the local minimum angular velocity is larger for shorter control times T during the first interval and the second interval with control times T shorter than the cycle determined by the pendulum length of the suspended load to be moved as a pendulum.

IPC 8 full level
B66C 23/84 (2006.01); **B66C 13/06** (2006.01)

CPC (source: EP US)
B66C 13/063 (2013.01 - EP); **B66C 13/18** (2013.01 - US); **B66C 23/00** (2013.01 - US); **B66C 23/701** (2013.01 - US);
B66C 23/84 (2013.01 - EP US)

Cited by
CN113389538A

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AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3272693 A1 20180124; **EP 3272693 A4 20181114**; **EP 3272693 B1 20200304**; CN 107406240 A 20171128; CN 107406240 B 20190913; JP 6792548 B2 20201125; JP WO2016148241 A1 20180607; US 10384915 B2 20190820; US 2018111803 A1 20180426; WO 2016148241 A1 20160922

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EP 16765070 A 20160317; CN 201680015952 A 20160317; JP 2016058510 W 20160317; JP 2017506610 A 20160317; US 201615558695 A 20160317